AN INTERNSHIP IN THE COASTAL ZONE MANAGEMENT PROGRAM

May 1975 - May 1977

at

the Pacific Urban Studies & Planning Program

University of Hawaii

by

Roy Takemoto

May 16, 1977

PREFACE

I have been employed by the UH Pacific Urban Studies and Planning Program (PUSPP) for the past two years. PUSPP was hired by the Department of Planning and Economic Development (DPED) as a consultant for the Coastal Zone Management (CZM) program to work on the "technical" considerations of the CZM plan.

Being employed by PUSPP, my experience in CZM has been an experience in the field of planning, which is a multi-disciplinary approach to solving social problems. Therefore, my exposure has included such areas as local politics, citizen participation, botany, marine biology, oceangraphy, soil erosion, water quality management, and policy formulation. My tasks have been mostly that of research--i.e., gathering information from books, journals, reports, people in government agencies, people in the community, and scientists. I have also done some cartography and air photo interpretation.

This report is an overview of the CZM program and some of my personal comments about the program.

ACKNOWLEDGEMENTS

This is the most important page of this report to me because it gives me an opportunity to openly express my gratitude to those who have guided me during my internship.

I am especially grateful to Kelvin Char who made it possible for a Marine Option Program student to be part of the CZM program. He generously shared his knowledge and expertise in all aspects of marine ecology with me, especially as it applied to "poking fish". Another person I'd like to equally express my gratitude to is David Higa. David's practical "down-to-earth" approach to problem solving was an invaluable lesson he taught me. A third person who I can never thank enough is Paul Bartram. Paul unselfishly imparted his simple and basic philosophy of resource management to me. Not to be outdone, I'd like to express my gratitude to my big boss, Kem Lowry. I don't think there is a more patient and understanding boss around.

I'd like to also acknowledge the other people on the CZM staff with whom I have shared ideas, rough times, and lots of good times: Art Challacombe, Brian Nishimura, Ann Hayward Rooney-Char, Bob Stanfield, and Vernon Umetsu.

Last but not least, I'd like to acknowledge the congenial secretaries who have assisted me in innumerable ways: Merriam Ryder, Barbara Awa, Wilma Yonemoto, and Carol Tabata.

The Coastal Zone Management Program

Coastal Zone Management (CZM) is a Federal program that came into existence with the passing of the CZM Act in 1972 (P.L. 92-583). It should not be confused with the Shoreline Protection Act of 1975, which is an entirely State-initiated measure to provide interim controls to protect shoreline resources while a comprehensive plan is developed under the CZM program. Once the CZM plan is adopted by the State Legislature, the Shoreline Protection Act will "self-destruct". In Hawaii, the Department of Planning and Economic Development (DPED) is the agency responsible for preparing the plan.

The CZM Act made available generous amounts of funds to encourage States to develop a plan to manage their coastal resources. The funds are distributed in two phases. The first phase makes money available for developing the plan (Sec. 305 of the Act). A State is allowed three years to complete this plan. The plan must then meet Federal approval to receive funds for the second phase, which is for the purpose of implementing the plan (Sec. 306).

The National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce is the Federal agency responsible for administering the CZM program and disbursing the funds. They have prepared guidelines to aid States in developing a plan. These guidelines stipulate six elements that should be included in the plan:

1) identification of the inland boundary of the coastal zone;
2) definition of what shall constitute permissible land and water uses in the coastal zone;
3) development of guidelines to determine which of these permissible uses have priority in the coastal zone;

4) identification of the legal mechanisms which control land and water uses in the coastal zone;
5) description of the organizational structure which shall implement the management program;
6) inventory of sensitive areas ("areas of particular concern") that require special management.

Three coastal problems were deemed to be inadequately addressed under the original CZM Act and were therefore given special attention as amendments to the Act. These problems were:

1) shoreline erosion;
2) public access to the shoreline;
3) siting of energy facilities.

Additional Federal funds are available for each amendment.

Hawaii's CZM program

In the beginning, the need for a CZM program in Hawaii was seriously questioned. It was felt that Hawaii had sufficient laws on the books to regulate land and water uses in the coastal zone. On paper, it does seem as though Hawaii already has an adequate CZM program. In practice, however, the situation is one of confusion because the implementation of these laws has been fragmented among a number of different agencies. Oftentimes the jurisdiction of these agencies overlap (e.g. the Division of Harbors and the U.S. Army Corps Engineers in coastal waters), and other times it seems like the wrong agency has jurisdiction (e.g. the Department of Transportation has jurisdiction over recreation activities in coastal waters). CZM could have helped the situation in one of two ways:

1) suggested a way to completely overhaul and reorganize the govern-

ment structure, or

2) maintain the status quo, but suggest a way to improve coordination among these agencies.

A major emphasis of the CZM program in Hawaii, then, has been one of tidying up laws and the management structure--which means that it has been a very political affair. Politics is concerned with power--it tries to answer the question of who will have the power to control a particular action or a particular area. Politics does not evaluate the performance of an agency, once it has been given power. For instance, the Statewide Citizens Forum requested one of the consultants hired by DPED to evaluate agency performance. The consultants passed this request around like a "hot potato". No agency likes to be criticized for not doing its job properly, and no one likes to criticize an agency publically because agencies can be vindictive. Yet improvement in agency performance is definitely needed because presently much of the decisions by agencies concerning coastal resources are based on personnel discretion. Personnel discretion implies that decisions are based more on potential political impacts rather than on objective criteria which consider the potential impacts to the natural environment. Three of the elements of the Federal CZM guidelines were intended to make a start in the development of these more objective criteria to guide decision-making. These elements are the permissible uses, the priority of uses, and the selection of "areas of particular concern". To fulfill the requirements for each of these elements a more technically-based knowledge is needed. Unfortunately, for the past three years, Hawaii has been preoccupied with dividing up political power and has generally neglected the technical aspects.

Anyone familiar with Hawaii politics knows about the intense conflict between County and State government. The Shoreline Protection Act gave immense power to the Counties. The CZM program, however, is in the hands of a State agency, namely the Department of Planning and Economic Development (DPED). The CZM bill submitted to the Legislature this past session declared the whole State as the coastal zone, which in essence meant that State jurisdiction would be extended over the Counties. Naturally, the Counties rebelled. Amendments to the bill swung in favor of the Counties--the interim measures of the Shoreline Protection Act were adopted as permanent features of the CZM program. As a concession, the State was given the privilege to set policies, but the Counties have the real power of implementing the management program. The bill passed as amended.

Current status of CZM in Hawaii

The current agenda is the submission of the plan for Federal approval, addressing the three amendments, and the development of guidelines for evaluating and establishing priorities among permissible uses. With the political aspects somewhat taken care of, hopefully some urgently needed technical work can get done. The technical research should investigate some of the following areas: the tolerance level of various resources to exploitation or pollution; the effects of various pollutants like sewage and thermal effluent on various marine ecosystems; an inventory of the distribution of various resources; the development of criteria for siting energy and other facilities; a more detailed knowledge of nearshore current patterns for purposes of waste dispersability; indicator species

for monitoring of environmental quality; and the impact of various land and water uses on coastal resources. Research in these areas will take time, but patience will be rewarded with a better understanding of man's impact on natural systems,and this understanding could then be incorporated into a management system that would make wiser decisions.

Personal comments

It is my impression that DPED views CZM merely as a means to get more Federal money. If motivation is limited to Federal money, the plan will be developed to satisfy Federal officials and not necessarily to address the coastal problems of this State. DPED reminds me of a student who does things for the sake of his grades rather than for the purpose of learning. This student does everything and anything that he thinks the teacher wants--and nothing more. In the same light, DPED does anything the Federal officials want--and no more. My point is that if DPED sincerely cared about doing something about the coastal problems in Hawaii, they would have developed a sound program that clearly stated the goals and the sequence of steps in the development of a program to attain these goals. As it happened, DPED's program had no internal logic. The program proceeded on a "wait-to-see-what-the-Feds-want-next" basis. It makes me wonder whether this is a normal operation of a beauracracy. Is it axiomatic to expect ineptness from government agencies? Are all planners really just beaucrats who care only about protecting their job security, thus refraining from any possibility that could stir controversy or insightful change?

I have thought about these questions and tried to think how I would do things differently if I were in DPED's shoes. It is not fair to criticize from hindsight, but I think it is a necessary exercise if I am to extract any lessons from this experience.

The first thing I would do would be to carefully research and document problems in the coastal zone. I use the word "problem" to mean any type of conflict of interests. Resources in the coastal zone are valued for different reasons, and conflict arises over

these differences in values. For example, an industrialist may look at a bay and envision a commercial harbor, a fisherman envisions papio, a scientist envisions a balanced ecosystem or a research grant, a boat owner envisions sailing or water skiing.

In order to get a grasp of these conflicts I think it is important to go out into the "field" and interview people in the community and in government agencies whose daily job is to "regulate" some of these problems, visit problem areas, seek the opinions of scientists, and plow through newspaper articles, records of controversial legislative hearings, and Environmental Impact Statements. The product would be a catalog of conflicts as different interest groups see it. I liken this approach to the inductive method of science where the procedure is to collect data and then make general conclusions, in other words going from the specific to the general. In contrast, one can cerebalize general categories of problems and then go around looking for "case examples" to support these categories. This is like the deductive approach, or going from the general to the specific. In my opinion, the "inductive" approach results in a description of problems that has a closer correlation to problems which really concern people. The "deductive" approach can easily skip over problems that do not readily fit into pre-conceived categories. Disadvantages of the "inductive" approach, however, are that it takes a longer time than the "deductive" approach, and it also offers less security because the end product is not readily apparent until the data have been collected and analyzed. Government agencies, as I have learned, move from crisis to crisis. They realize at the last moment that they need something to prove that

they have not been loafing, so time is always urgent. Government agencies also need lots of security. Therefore, to meet the needs of the government agency (DPED), CZM adopted the "deductive" approach.

The general categories for CZM were termed "management purposes" and problems were classified according to these "management purposes" categories. There were six categories: natural resources, historic values, scenic values, recreation values, economic values, and public health and safety (natural hazards). Problems were identified by citizen groups and classified according to these categories. Many problems were hard to classify because they pertained to several categories. For instance, the problem of overfishing could fall under either recreation or natural resources; fishponds could fall under historic values, scenic values, economic values, or natural resources.

If we went by the "inductive" approach we could have proceeded in several directions. Once we have collected the data from the many "field" sources, we could then proceed to group these conflicts either by interest groups (government, businessmen, tourists, local people, surfers, divers, boat owners, etc.), by geographic area, or by resources. Grouping by geographic area would give an indication of where conflicts cluster and these areas would then be likely candidates for "areas of particular concern"--i.e., areas that would need special management. Grouping by resources would give an indication of the resources that are in demand and which may be subject to stress. When the time comes to manage this resource, a clearer idea would be already at hand of the interest groups involved and the trade-offs between these intesest groups that would result from alternative management strategies.

A grouping by resources dove-tails nicely with a resource inventory. The intensity of the conflicts gives an idea of the demand and the inventory gives an indication of the supply. Such information is useful to help decide whether a resource should be preserved, conserved, or restored. To make wise decisions, however, requires a greater understanding of the system in which they are a part. Silent Spring was an abrupt awakening to the fact that everything depends on everything else; our impacts on the environment are not isolated in time or space. The intricate connections are at once a seemingly insurmountable task to unravel and a wonder to be appreciated. We can never know all there is to know about nature, but we can make an attempt to manage resources according to the best available knowledge, with the commitment to constantly modify our approach as we expand on our imperfect knowledge.

One reason why our knowledge will always be imperfect is because we can study nature at infinite levels of detail. Studies in the natural sciences range from atoms to parts of atoms, all the way to the ecology of reef systems, to the ecology of North America, to the ecology of this biosphere, to the study of solar systems and beyond. A larger scale provides perspective, whereas a more detailed scale loses some perspective but provides more information of the mechanisms of a system. A planner must decide which level of detail is useful for his purposes. I think DPED chose a level that was too general. A statement like "rain washes from the mountains to the sea, therefore the whole state should be the coastal zone" is too general. When one descends to a finer level of detail, more factors become involved, the outlines of a more general perspective become fuzzier, and effort must be expended to understand a more

technical jargon. At this finer level of detail, however, one can deal better with the vagaries of nature and the "exception to the rules". This understanding will provide a more objective foundation upon which to base management decisions.

Communication between scientists, who study nature in detail, and planners, who have a general understanding of natural systems, needs to be improved. Both have their merits--a planner may see connections that a scientist may miss because of his narrower perspective, and a scientist will have knowledge to recommend specific steps in devising a management strategy. I respect scientists who attempt to present their ideas simply; and I respect planners who make an attempt to understand some of the basic principles of science. With efforts from both sides, advancement can be made in the wiser management of our natural resources.. Wiser management of natural resources is my hope of the CZM program.